Alaska
Forest Pest Control
Supplemental Information

Category Twelve

In general, applicators who apply pesticides to property other than their own, or act as a pesticide consultant must obtain certification from the Alaska Department of Environmental Conservation (ADEC) Pesticide Program. Applicators who apply restricted-use pesticides, regardless of location, must also be certified.

Applicators who use pesticides for forestry vegetation management programs, for controlling forest insects, or for maintaining logging roads must be certified by the Alaska ADEC in the Forest Pest Control Category (Category Twelve).

The information needed to successfully complete the written core examination required for all certified pesticide applicators in Alaska includes:

1. National Pesticide Applicator Certification Core Manual;
2. Alaska Core Manual Supplement; and
3. State of Alaska Pesticide Regulations in Title 18, Chapter 90 of the Alaska Administrative Code (18 AAC 90)

The information needed to successfully obtain certification in Category Twelve in Alaska includes:

1. This Alaska Supplemental Manual; and
2. United States Forest Service publication, *Insects and Diseases in Alaskan Forests*: http://www.fs.fed.us/r10/spf/fhp/idbook/Page158.htm.

Learning Objectives

In order to be able to pass the Category Twelve exam, you must be able to meet the following objectives:

General

- State the number of acres of forest lands in Alaska, including the number of acres by ownership.
- Explain some factors why forest pest management is uncommon in Alaska.

From *Insects and Diseases in Alaskan Forests*

Introduction

- Explain how forest insects and diseases can be beneficial to forest health.

Forests of Alaska

- List common trees found in the Alaska coastal rainforest.
- List common trees found in the south central Alaska transitional forest.
- List common trees found in the Alaska boreal forest.
- Describe the most significant cause of large scale disturbance in each forest type.

Invasive Species

- Describe some reasons why invasive species may become more prevalent in Alaska.

Defoliators

- Describe how defoliator insects damage trees.

- Explain why defoliators can have more impact on coniferous trees.
- Explain the different feeding habits of leaf chewers, leaf miners, skeletonizers, and sap-suckers.
- List the most important defoliators in Alaska, and describe the hosts, distribution, identification, damage, biology, and behaviors of each.

Bud and Shoot Insects

- Describe how bud and shoot insects damage trees.
- List the most important bud and shoot insects in Alaska, and describe the hosts, distribution, identification, damage, biology, and behaviors of each.

Sap-Sucking Insects and Mites

- Describe how sap-sucking insects and mites damage trees.
- Describe the common signs of damage from these pests.
- Identify the type of tree (conifer or hardwood) that is most susceptible to these pests.
- List the most important sap-sucking insects and mites in Alaska, and describe the hosts, distribution, identification, damage, biology, and behaviors of each.

Bark Beetles

- Describe how bark beetles damage trees.
- List some of the common traits of Alaska bark beetles.
- Explain what an egg gallery is, and what information can be gained from observing the egg gallery.
- List the most important bark beetles in Alaska, and describe the hosts, distribution, identification, damage, biology, and behaviors of each.

Wood Borers

- Describe how wood borers damage trees.
- Describe the damage to trees caused by round-headed borers or long-horned beetles.
- Describe the general characteristics of larvae and adults of round-headed borers.
- Describe the type of wood that flat-headed wood borers are typically found in.
- Describe the characteristics of the larval galleries of flat-headed wood borers.
- Describe the general characteristics of adult flat-headed borers.
- Describe how ambrosia beetles damage logs.
- Describe the conditions necessary for ambrosia beetle activity.
- Describe the habitat where wood boring wasps are typically found.
- List the common wood borers in Alaska, and describe the hosts, distribution, identification, damage, biology, and behaviors of each.

Cone and Seed Insects

- Describe how cone and seed insects damage trees and forests.
- List the common cone and seed insects in Alaska, and describe the hosts, distribution, identification, damage, biology, and behaviors of each.

Tree Diseases

- List the tree diseases of greatest concern in Alaska.
- List the common foliar diseases in Alaska, and describe the hosts, distribution, identification, damage, biology, and behaviors of each.
- List the common shoot diseases in Alaska, and describe the hosts, distribution, identification, damage, biology, and behaviors of each.
- List the common stem and branch diseases in Alaska, and describe the hosts, distribution, identification, damage, biology, and behaviors of each.
- List the common root diseases in Alaska, and describe the hosts, distribution, identification, damage, biology, and behaviors of each.
- Explain the best way to reduce wood decay.
- Describe the two ways that wood decay fungus decomposes wood.
- List the common wood decay and stain fungi in Alaska, and describe the hosts, distribution, identification, damage, biology, and behaviors of each.

Animal Damage

- List the animals that may injure trees in Alaska.
- Describe the characteristic damage cause by each of these animals.

GENERAL INFORMATION ON ALASKA FOREST MANAGEMENT

Alaska has nearly 130 million acres of forest lands. Approximately 77 million acres are federally owned, 22 million acres are owned by the state, and 30 million acres are privately owned (Alaska Department of Commerce).

There are few planted stands, forest nurseries, or tree farms in Alaska. Pest management in natural (unmanaged) forests is not commonly conducted except in the case of serious outbreaks or infestations. Direct control of pests is limited by the vast areas involved, the inaccessibility of many forested areas, and the long life cycle of trees. In cases where controls must be applied, understanding the life-cycle of the pest is essential for success.

The goals of forests managed for habitat are significantly different than those managed for timber harvest. Forests managed for habitat can benefit from pests and diseases that contribute to structural and biological diversity. In areas where timber production is important, there is less tolerance for pests and diseases.

Before Using Any Pesticide

STOP

All pesticides can be harmful to health and environment if misused.

Read the label carefully. Use only as directed.